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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,905	12/27/2001	Seiichiro Higashi	038404.02	1688
25944	7590	10/31/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			MENGISTU, AMARE	
			ART UNIT	PAPER NUMBER
			2629	

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,905

Applicant(s)

HIGASHI, SEIICHIRO

Examiner

Amare Mengistu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 79,80 and 84-93 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 84,85,90 and 93 is/are allowed.
- 6) ☒ Claim(s) 79,80,86-89,91 and 92 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>June 27, 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 79,80,86-89 and 92 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification as originally filed has failed to disclose the newly recited claims limitations of claims 79,80,86-89 and 92 "***an active matrix substrate comprising: at least one analog video signal line...***" The specification as originally filed does not teach one skill in the art that the active matrix substrate comprises at least one video signal line. The figure shows that the video signal line must be out side the matrix substrate.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 79 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Herold** (5,481,651) in view of **TU et al** (5,335,254).

As to claim 79, **Herold** discloses an active matrix substrate comprising: a Plurality of scan lines (fig.1 (108)); a plurality of data lines (fig.1 (104)); a plurality of pixel transistors corresponding to intersections of the plurality of scan lines and the plurality of data lines (fig.5 (100), it is inherent for the LCD pixels to have a TFT); a first data line driving circuit to a first end of each of the plurality of data lines (fig.5 (504)); at least one analog video signal line providing an analog video signal to the first data driving circuit (fig.5 (502)). **Herold** did not expressly detailed that the data driving circuit including a shift register and a gate circuit including a NAND gate, the NAND gate inputting an output signal from the shift register and enable signal.

However, the patent of **Tu et al** clearly teaches that it is well known for LCD data driver to have a shift register (col.2, line 61-64, col.3, lines 60-62) and a gate circuit including a AND gate, the AND gate inputting an output signal from the shift register (col.3, lines 60- col.4, lines 4) and enable signal (col.5, lines 23-33).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to incorporate the shift register, the AND gate driver and enable signals of **Tu et al** into the data driver circuit of **Herold's**, because this will allow the LCD system to latching therein a large quantities of data fed in serial form and outputting the data in parallel form in order to reduce the operating margin of the LCD driver circuit.

Claims 80 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kobayashi et al** (4,901,066).

As to claims 80 and 91, **Kobayashi et al** clearly teaches a driving circuit comprising: a plurality of scan line (fig.2 (n-1...n+4), fig. 4(scanning line)), a plurality of data line (fig.2 (S1...S4), fig.4 (signal line)), a first data line data line driver (fig.4 (70)), a shift register (figs. 4 and 8 (71)); a plurality of XOR gates (fig.8 (95), col.7, lines 35-41) connected to the shift register (71); a video signal line (figs.4 and 8 (106, 107, 108)); a plurality of analog switches (figs.4 and 8 (73)), each of the analog switches electrically connected to XOR gate (fig.8 (95)) and video signal line (figs.4 and 8 (106,107,108)).

Kobayashi et al clearly teaches that the XOR gates receives one out puts from the shift register, but failed to teach that the XOR gates receives two outputs from the shift register.

However, it would have been obvious to one skill In the art at the time of the invention was made to have recognize that **Kobayashi et al's** XOR is able to receive one out put of the shift register and it would have been also be able to receive two out puts from the shift register because **Kobayashi et al's** XOR and shift register are the same as applicant XOR and shift register and would function the same.

Allowable Subject Matter

5. Claims 84,85,90 and 93 are allowed.

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6. Claims 86-89 and 92 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. The following is an examiner's statement of reasons for allowance: None of the references cited (**Herold, Kobayashi et al or Tu**) has failed to teach applicant's claimed invention ***"a first output enable signal line and a second output enable signal line; ... each of the first of the first NAND circuits electrically connecting the first output enable signal line; each of the second NAND circuit electrically connecting the second output enable signal line;"***

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

8. Applicant's arguments with respect to claims 79-80, 84-93 has been considered but is moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amare Mengistu whose telephone number is (571) 272-7674. The examiner can normally be reached on M-F, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3639. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Amare Mengistu
Primary Examiner
Art Unit 2629

AM

Oct. 28, 2006